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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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1421

7590

01/11/2005

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EXAMINER

VANNUCCI, JAMES

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/009,986

Applicant(s)

CHIAO, JUNG-CHIH

Examiner

Jim Vannucci

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 13-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-16 is/are rejected.
- 7) ☒ Claim(s) 17-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Budrow et al.(3,665,477) in view of Brankovic(6,198,460).

Claim 13, figure 4 of Budrow discloses transmission line conductors(30), rotating antenna arms(16 & 22), and rotatably coupled support arms(40).

Budrow discloses a single actuator mechanism(38; and col. 4, lines 58-60) functioning as recited.

Figure 4 of Brankovic discloses using two actuator mechanisms to adjust the direction of the radiated field of an antenna(7; and col. 5, lines 15-23).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use two actuator mechanisms as disclosed in Brankovic instead of one as disclosed in Budrow for improved steering of the antenna's radiated field as disclosed in Budrow.

3. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Budrow in view of Brankovic as applied above, and further in view of Faulkner et al.(6,023,209).

Budrow and Brankovic do not disclose CPS or CPW transmission lines.

Claims 14-15, Faulkner discloses the use of CPW and CPS transmission lines to suppress undesired electrical propagation(col. 1, lines 8-9 and 58-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the transmission lines disclosed in Faulkner with the device disclosed in Budrow and Brankovic to improve suppression of undesired signals as disclosed in Faulkner.

4. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Budrow in view of Brankovic as applied above, and further in view of Knipe et al.(5,652,671).

Budrow and Brankovic do not disclose micro-mechanical hinges.

Claim 16, Budrow discloses three hinges(44, 42 & 26), and Knipe discloses the use of micro-mechanical hinges in electrical circuitry for the miniaturization of the electrical device(col. 1, lines 9-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use micro-mechanical hinges as disclosed in Knipe in the device disclosed in Budrow and Brankovic so the device can be made smaller as disclosed in Knipe.

***Allowable Subject Matter***

5. Claims 17-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter. The following limitations are primarily responsible for distinguishing these claims over the prior art.

Regarding claims 17-20, all of the limitations concerning the first micro-mechanical hinge structure; and regarding claims 21-23, all of the limitations concerning the second and third micro-mechanical hinge structure.

Proper motivation was not found in the prior art to combine references disclosing the recited hinge structure with the references that disclose the other limitations recited in these claims.

#### ***Election/Restrictions***

7. Claims 1-12 and 24-62 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on October 12, 2004.

#### ***Correspondence***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jim Vannucci whose phone number is (571) 272-1820.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center whose telephone number is (703) 308-0956.

Papers related to Technology Center 2800 applications only may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (703) 872-9306.



James Vannucci